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     FILE 'CAPLUS' ENTERED AT 23:53:23 ON 26 JUN 2003
L17      128572 S L15 OR L16
L18         120 S L17 AND (HONEYBEE# OR BEE OR BEES OR APIS)
L19           5 S L18 AND (MITE OR MITES OR VARROA OR ACARAPIS)
```

See also next page for more

MAILCopy

AN 1998-83064 CROPU I G
TI Controlling infestations in honey **bee** colonies e.g. **Varroa mites** using slow release gel containing essential oil or organic acid e.g. thymol.
IN Watkins M
PA Vita-Euro
LO Odiham, U.K.
PI WO 9747193 A1 19971218
AI GB 1996-12403 19960613
WO 1997-EP3078 19970612
DT Patent
LA English
OS WPI: 1998-051935 [05]
FA AB; LA; CT
TI Controlling infestations in honey **bee** colonies e.g. **Varroa mites** using slow release gel containing essential oil or organic acid e.g. thymol.
AB A method for control of acarid, lepidopteran, fungal or bacterial infestations in **honeybee** colonies (especially **Varroa** jacobsoni) is described, using a slow release gel, containing an essential oil (preferably menthol, geraniol, thymol, myrcene, citral, **limonene**, carene, camphor, eugenol, cineole, lemon oil, eucalyptus oil or neem oil, especially thymol) or organic acid (e.g. formic, acetic or oxalic acid), to the hives. The slow release gel is also claimed. The gel is in a shallow tray dispenser with a hermetically sealing lid or in strips, pellets, tablets or dispenser trays, and is used for a 4-6 week treatment period. Preparation of formulations of thymol, camphor, calcium oxalate, cineole (eucalyptol), **limonene** , menthol, neem oil, acetic acid and formic acid. Tests with a 25% thymol formulation, at 1 or 2 trays/hive, for control of V. jacobsoni are also described.

ABEX The method is also useful for control of **Acarapis** woodii, Tropilaelaps clareae, Galleria mellonella, Achroia grisella, Braula caeca, Ascosphaera **apis**, Bacillus larvae and Melissococcus pluton, and is effective against both pyrethroid-resistant and susceptible V. jacobsoni. The concentration of oil or acid is chosen to reduce the level of **Varroa** infection to less than 20% over at least one **mite** reproductive cycle. The formulation comprises a regulated dose release of active substance into the hive over a set period of time, at 10-40 deg. The thymol preparation described consisted of 0.38 parts Carbopol EZ1 dissolved in 73.86 parts water, followed by 0.76 parts thymol, then 0.76 parts triethanolamine, to form a gel. Shallow plastic trays are filled with 50 g portions of the gel, then hermetically sealed. Similar formulations containing thymol (10, 15, 20, 25, 30, 35 or 40%), camphor (25%) and calcium oxalate (25%) are described, also suspensions containing cineole (25%), **limonene** (25%), menthol (25%), neem oil (25%), acetic acid (30%) and formic acid (25%). In tests with the 25% thymol gel, 1 or 2 trays, each containing 50 g gel, were opened and placed in a hive, on top of the brood frames, for 6 weeks. Average temperature was 33-34 deg inside the hive and 17-35 deg outside. After 6 weeks, V. jacobsoni infestation was reduced by 48.3% with 1 tray, 77.2% with 2 trays, and 12.9% in the untreated control. (16

AN 1990:174103 CAPLUS
DN 112:174103
TI Synergistic varrocide aerosol containing acetone for **honeybee** colonies
IN Vesely, Vladimir; Titera, Dalibor; Kamler, Frantisek
PA Czech.
SO Czech., 2 pp.
CODEN: CZXXA9
DT Patent
LA Czech
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CS 261124	B1	19890112	CS 1986-9452	19861217
PRAI CS 1986-9452		19861217		

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AU Ellis, M. D.; Baxendale, F. P.
CS Department of Entomology, University of Nebraska, 202 Plant Industries Building, Lincoln, NE 68583-0816, USA.
SO Journal of Economic Entomology, (1997) Vol. 90, No. 5, pp. 1087-1091. 34 ref.
ISSN: 0022-0493
DT Journal
LA English
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AN 92:125895 CABA
DN 920232424
TI Evaluation of botanical compounds for control of the honey-**bee** tracheal **mite**, **Acarapis** woodi
AU Calderone, N. W.; Bruce, W. A.; Allen-Wardell, G.; Shimanuki, H.
CS Bee Research Laboratory, ARS, USDA, Building 476, BARC-EAST, Beltsville, MD 20705, USA.
SO American Bee Journal, (1991) Vol. 131, No. 9, pp. 589-591. Bj.
ISSN: 0002-7626
DT Journal
LA English
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DN 790209312
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CS USSR, All-Union Scientific Research Institute of Veterinary Sanitation
PI 19780000
SO Japanese Kokai (unexamined patent application), No. 53-139722, pp. 7. B.
DT Patent
LA Japanese
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AN 80:7345 CABA
DN 790209033
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Akarizides Praparat zur Diagnostik und Bekampfung von Ektoparasiten der Bienen
AU Poljakov, A. A.; and 9 others; Polyakov, A. A.
CS Vsesoyuznoi Nauchno-issledovatel'skii Inst. Veterinarnoi Sanitarii, Moscow, USSR.
PI 19780000
SO German Federal Republic Offenlegungsschrift, No. 2719722, pp. 16. B.
DT Patent
LA German
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AN 2001:92646 CABA
DN 20013082193
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AU Elzen, P. J.; Baxter, J. R.; Elzen, G. W.; Rivera, R.; Wilson, W. T.
CS Kika de la Garza Subtropical Agricultural Research Center, USDA-ARS, 2413 E. Hwy. 83, Weslaco, TX 78596, USA.
SO American Bee Journal, (2000) Vol. 140, No. 8, pp. 666-668. 10 ref.
ISSN: 0002-7626
DT Journal
LA English
TI Evaluation of grapefruit essential oils for controlling **Varroa** jacobsoni and **Acarapis** woodi.
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AN 2000-83996 CROPU I G
TI Laboratory evaluation of miticides to control **Varroa** jacobsoni (Acari: Varroidae), a honey **bee** (Hymenoptera: Apidae) parasite.
AU Lindberg C M; Melathopoulos A P; Winston M L
CS Univ.Simon-Fraser
LO Burnaby, B.C., Can.
SO J.Econ.Entomol. (93, No. 2, 189-98, 2000) 3 Fig. 4 Tab. 47 Ref.
CODEN: JEENAI
AV Department of Biological Sciences, Simon Fraser University, Burnaby, B.C., Canada V5A 1S6.
DT Journal
LA English
FA AB; LA; CT
TI Laboratory evaluation of miticides to control **Varroa** jacobsoni (Acari: Varroidae), a honey **bee** (Hymenoptera: Apidae) parasite.
AB Essential oil components was screened for selectivity and control of **Varroa** jacobsoni on **honeybees** (**Apis** mellifera), using a dish bioassay method, and **mite** and **bee** LD50s were determined after 24, 34 and 67 hrs. Compounds were: alpha-terpineol, benzyl acetate, benzyl alcohol, camphor, carvacrol, cineole, cinnamic alcohol, cinnamic aldehyde, cinnamon oil, citronellal, clove oil, eugenol, methanol (solvent), n-hexane, **limonene**, Magic3 (a proprietary mix of 5 essential oil components), menthol, methyl salicylate, phenyl ethyl alcohol, phenyl ethyl propionate, pulegone, terpinen-4-ol, thymol and trans-anethole, with tau-fluvalinate and formic acid as positive controls. Highest **mite** toxicity and lowest **bee** mortality were with clove oil, benzyl acetate, thymol, carvacrol, methyl salicylate and Magic 3, and thymol, clove oil and Magic3 were most active by vapor exposure.
ABEX **Bees** and **mites** were confined in 60 x 20 mm petri dishes with a sugar-cube for food, and test components (dissolved in hexane) were applied to the dish base, allowing, vapor, contact and oral applications. In some tests, organisms were exposed to vapor only. Treatments considered to be selective killed over 70% of **mites** at doses which killed less than 30% of **bees**. The most selective treatment was tau-fluvalinate, while thymol, clove oil, Magic3 and methyl salicylate were at least as selective as formic acid. Estimated **mite** LD50s were significantly lower for complete exposure applications of thymol and Magic3 than for vapor applications, indicating that these compounds act mainly as fumigants, while estimated LD50s for clove oil were similar for both vapor and complete exposure.

AN 2000-84096 CROPU I G
TI Method to control parasitic **mites** on beneficial insects e.g. Apidae.
IN Black B C; Baubach W R; Beluch M P
PA Am.Cyanamid
LO Madison, N.J., USA
PI EP 972448 A2 20000119
AI US 1998-115787 19980714
EP 1999-305410 19990707
DT Patent
LA English
OS WPI: 2000-099724
FA AB; LA; CT
TI Method to control parasitic **mites** on beneficial insects e.g. Apidae.
AB A method for the protection of beneficial insects, such as **honeybees**, from infestation and damage caused by parasitic **mites**, by application of tebufenpyrad (TEB) to the insects or **mites**, their brood chamber or habitat, is claimed. In acaricidal bioassays, **honeybees** infested with 70-90% **Varroa** jacobsoni received topical application of TEB (0.006, 0.06 and 0.6 ug/ **bee**). Treated **bees** were placed in an incubator at 31 deg in the dark and fed a 50% sugar solution for 5 days; at 0.6 ug/ **bee**, mortality rates for **bees** and **mites** were 28% and 92%, resp. **Honeybees** infested with **Acarapis** woodi were treated with 500 ppm TEB in **acetone**; 100% **mite** mortality occurred after 8-8.5 min. Field tests with two V. jacobsoni infested hives, sticky boards treated with 18% TEB in beeswax/lard base were placed in the hives; one day after treatment, **mite** counts of 1777 and 1080 **mites**/day were recorded.
ABEX The method is claimed especially for the control of parasitic **mites**, such as, V. jacobsoni, A. woodi and Tropilaelaps clareae. The claimed advantage is that the method can be used with little or no concomitant harm to the beneficial host. (4

AN 1998-83064 CROPU I G
TI Controlling infestations in honey **bee** colonies e.g. **Varroa mites** using slow release gel containing essential oil or organic acid e.g. thymol.
IN Watkins M
PA Vita-Euro
LO Odiham, U.K.
PI WO 9747193 A1 19971218
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DT Patent
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ABEX The method is also useful for control of **Acarapis** woodii, Tropilaelaps clareae, Galleria mellonella, Achroia grisella, Braula caeca, Ascosphaera **apis**, Bacillus larvae and Melissococcus pluton, and is effective against both pyrethroid-resistant and susceptible V. jacobsoni. The concentration of oil or acid is chosen to reduce the level of **Varroa** infection to less than 20% over at least one **mite** reproductive cycle. The formulation comprises a regulated dose release of active substance into the hive over a set period of time, at 10-40 deg. The thymol preparation described consisted of 0.38 parts Carbopol EZ1 dissolved in 73.86 parts water, followed by 0.76 parts thymol, then 0.76 parts triethanolamine, to form a gel. Shallow plastic trays are filled with 50 g portions of the gel, then hermetically sealed. Similar formulations containing thymol (10, 15, 20, 25, 30, 35 or 40%), camphor (25%) and calcium oxalate (25%) are described, also suspensions containing cineole (25%), **limonene** (25%), menthol (25%), neem oil (25%), acetic acid (30%) and formic acid (25%). In tests with the 25% thymol gel, 1 or 2 trays, each containing 50 g gel, were opened and placed in a hive, on top of the brood frames, for 6 weeks. Average temperature was 33-34 deg inside the hive and 17-35 deg outside. After 6 weeks, V. jacobsoni infestation was reduced by 48.3% with 1 tray, 77.2% with 2 trays, and 12.9% in the untreated control. (16

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PA Czech.
SO Czech., 2 pp.
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DT Patent
LA Czech
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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AU Elzen, P. J.; Baxter, J. R.; Elzen, G. W.; Rivera, R.; Wilson, W. T.
CS Kika de la Garza Subtropical Agricultural Research Center, USDA-ARS, 2413 E. Hwy. 83, Weslaco, TX 78596, USA.
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ISSN: 0002-7626
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LA English
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AU Lindberg C M; Melathopoulos A P; Winston M L
CS Univ.Simon-Fraser
LO Burnaby, B.C., Can.
SO J.Econ.Entomol. (93, No. 2, 189-98, 2000) 3 Fig. 4 Tab. 47 Ref. CODEN: JEENAI
AV Department of Biological Sciences, Simon Fraser University, Burnaby, B.C., Canada V5A 1S6.
DT Journal
LA English
FA AB; LA; CT
TI Laboratory evaluation of miticides to control **Varroa** jacobsoni (Acari: Varroidae), a honey **bee** (Hymenoptera: Apidae) parasite.
AB Essential oil components was screened for selectivity and control of **Varroa** jacobsoni on **honeybees** (**Apis** mellifera), using a dish bioassay method, and **mite** and **bee** LD50s were determined after 24, 34 and 67 hrs. Compounds were: alpha-terpineol, benzyl acetate, benzyl alcohol, camphor, carvacrol, cineole, cinnamic alcohol, cinnamic aldehyde, cinnamon oil, citronellal, clove oil, eugenol, methanol (solvent), n-hexane, **limonene**, Magic3 (a proprietary mix of 5 essential oil components), menthol, methyl salicylate, phenyl ethyl alcohol, phenyl ethyl propionate, pulegone, terpinen-4-ol, thymol and trans-anethole, with tau-fluvalinate and formic acid as positive controls. Highest **mite** toxicity and lowest **bee** mortality were with clove oil, benzyl acetate, thymol, carvacrol, methyl salicylate and Magic 3, and thymol, clove oil and Magic3 were most active by vapor exposure.
ABEX **Bees** and **mites** were confined in 60 x 20 mm petri dishes with a sugar-cube for food, and test components (dissolved in hexane) were applied to the dish base, allowing, vapor, contact and oral applications. In some tests, organisms were exposed to vapor only. Treatments considered to be selective killed over 70% of **mites** at doses which killed less than 30% of **bees**. The most selective treatment was tau-fluvalinate, while thymol, clove oil, Magic3 and methyl salicylate were at least as selective as formic acid. Estimated **mite** LD50s were significantly lower for complete exposure applications of thymol and Magic3 than for vapor applications, indicating that these compounds act mainly as fumigants, while estimated LD50s for clove oil were similar for both vapor and complete exposure.

AN 2000-84096 CROPU I G
TI Method to control parasitic **mites** on beneficial insects e.g. Apidae.
IN Black B C; Baubach W R; Beluch M P
PA Am.Cyanamid
LO Madison, N.J., USA
PI EP 972448 A2 20000119
AI US 1998-115787 19980714
EP 1999-305410 19990707
DT Patent
LA English
OS WPI: 2000-099724
FA AB; LA; CT
TI Method to control parasitic **mites** on beneficial insects e.g. Apidae.
AB A method for the protection of beneficial insects, such as **honeybees**, from infestation and damage caused by parasitic **mites**, by application of tebufenpyrad (TEB) to the insects or **mites**, their brood chamber or habitat, is claimed. In acaricidal bioassays, **honeybees** infested with 70-90% **Varroa** jacobsoni received topical application of TEB (0.006, 0.06 and 0.6 ug/ **bee**). Treated **bees** were placed in an incubator at 31 deg in the dark and fed a 50% sugar solution for 5 days; at 0.6 ug/ **bee**, mortality rates for **bees** and **mites** were 28% and 92%, resp. **Honeybees** infested with **Acarapis** woodi were treated with 500 ppm TEB in **acetone**; 100% **mite** mortality occurred after 8-8.5 min. Field tests with two V. jacobsoni infested hives, sticky boards treated with 18% TEB in beeswax/lard base were placed in the hives; one day after treatment, **mite** counts of 1777 and 1080 **mites**/day were recorded.
ABEX The method is claimed especially for the control of parasitic **mites**, such as, V. jacobsoni, A. woodi and Tropilaelaps clareae. The claimed advantage is that the method can be used with little or no concomitant harm to the beneficial host. (4